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EXAMINER

FOSTER, JUSTIN B

ART-UNIT	PAPER NUMBER
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2624

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/411,840

Applicant(s)

TAKAHASHI, HIROYUKI

Examiner

Justin Foster

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 3-4, 7, 15-16, 19, 27-28 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. With regard to claims 3-4, 15-16 and 27-28 the phrase "transferring page number information" is vague and indefinite. Applicant does not particularly point out what this "page number information" is and how it relates to the color image and monochrome image.
3. With regard to claims 7, 19 and 31 applicant does not particularly point out and distinctly claim what the "plural operation modes" are. Also, the phrase "every each operation mode from the computer" is vague and indefinite. Applicant does not state how different operation modes are involved in the data transference methods.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan, *et*

~~al.~~ (6,003,065) in view of Ng (5,014,093) in further view of Xerox Disclosure Journal, P. F.

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Morgan, vol. 16, No. 6, Nov./Dec. 1991, pp. 381-383, "Integration of Black Only and Color Printers", hereinafter referred to as "Morgan". With regard to claim 1, Yan discloses an image formation system composed of a color image formation apparatus and a monochrome image information apparatus connected to a network, see lines 34-57 of column 22. Yan suggests, in lines 51-55 of column 22, the detection of which pages are color and which pages are black and white. Yan, however, does not disclose a judgment means for performing this detection.

However, lines 2-6 of column 6 of Ng disclose sensors 81R, 81G, and 81B, which sense the red, green, and blue content of the image respectively. Lines 24-33 of column 6 disclose the step of comparing the intensity of the above signals, wherein if the content of the three signals is approximately equal the image is judged as monochrome, otherwise the image is judged as a color image. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the apparatus of Yan to include judgment means for judging if each page of a job is color or black and white, as taught by Ng since the above steps of Ng are functionally equivalent to the judgment means of the claimed invention. The motivation for doing so would have been to allow the color pages to be sent to a slower, higher resolution color printer while the black and white pages are sent to a higher speed, lower resolution printer, thereby increasing the overall efficiency of the print job. Yan discloses, in lines 43-46 of column 22, a printing application used to distribute portions of a print job to different printers. Yan further suggests, in lines 51-55 of column 22, sending color pages of a print job to a color printer and sending monochrome pages of a print job to a monochrome printer. The above disclosures of Yan are functionally equivalent to the separation means of the claimed invention. Yan does not disclose

~~a mixing means for mixing the color sheets and the monochrome sheets in the proper collated job~~

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order. Morgan teaches, in lines 11-13 of the third paragraph of page 382, a sheet feeding means wherein the color pages are interleaved with the monochrome pages in proper job order. This sheet feeding means is functionally equivalent to the mixing means of the disclosed invention. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the apparatus of Yan to include mixing means for mixing the sheets formed by the color image formation apparatus and the sheets formed by the monochrome image formation apparatus, in accordance with the judgment result of the judgment means. The benefit of this modification would be to collate the printed sheets in the proper job order without the user having to do so by hand.

3. With regard to claim 3, Yan in view of Ng in further view of Morgan discloses the invention as stated in claim 1. Yan discloses sending color image data and monochrome image data to separate printers. Any time print data is transferred to a printer in any printer format, page number information is necessarily transferred along with it. Therefore, the system of Yan inherently transfers page number information to the monochrome image formation apparatus along with the monochrome print data.

4. With regard to claim 4, Yan in view of Ng in further view of Morgan discloses the invention as stated in claim 1. Yan discloses sending color image data and monochrome image data to separate printers. Any time print data is transferred to a printer in any printer format, page number information is necessarily transferred along with it. Therefore, the system of Yan inherently transfers page number information to the color image formation apparatus along with the color print data.

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5. With regard to claim 5, Yan in view of Ng in further view of Morgan discloses the invention as stated in claim 1. Morgan further discloses, in lines 4-10 of the third paragraph of page 382, the system of transferring the color sheets to the monochrome printer and inserting the color pages in the proper order interleaved with the monochrome pages.

6. With regard to claim 6, Yan in view of Ng in further view of Morgan discloses the invention as stated in claim 1. Morgan further discloses, in lines 4-10 of the third paragraph of page 382, the system of transferring the color sheets to the monochrome printer and inserting the color pages in the proper order interleaved with the monochrome pages. Morgan does not disclose the system of transferring the monochrome sheets to the color printer and inserting the color pages in the proper order interleaved with the color pages. However, this is simply the reverse of the process disclosed by Morgan. The Court has decided in *Ex parte Rubin*, 128 USPQ 440 (Bd. App. 1959) that merely reversing the order of a prior art process is obvious. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made for the system of Morgan to transfer the monochrome sheets to the color printer and insert the color pages in the proper order interleaved with the color pages, the reverse of the Morgan system.

7. Claims 2 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan in view of Ng in further view of Morgan in further view of Sales, *et al.* (4,893,153). With regard to claim 2, Yan in view of Ng in further view of Morgan discloses the invention as stated in claim 1. Yan in view of Ng in further view of Morgan does not disclose transferring the same data to each of the color image formation apparatus and the monochrome image formation apparatus.

~~Sales teaches, in lines 51-65 of column 1, the process of a single apparatus producing all the~~

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multi-color pages of a job, followed by all the single-color pages of a job, and then collating the two types. It would have been obvious to one of ordinary skill in the art at the time the invention was made to transfer the same data to each of the color image formation apparatus and the monochrome image formation apparatus. This would save the transferring computer the time of determining which printer gets which pages.

8. With regard to claims 7-9, Yan in view of Ng in further view of Morgan discloses the invention as stated in claim 1. Yan discloses, in lines 34-57 of column 22, a system wherein color page data is transferred to the color printer and monochrome data is transferred to the monochrome printer. Yan does not disclose selecting from plural operation modes wherein one mode transfers all the print data to both the color and monochrome printers and a second mode transfers only the color data to the color printer and only the monochrome data to the monochrome printer. Sales teaches, in lines 51-65 of column 1, a system wherein all the data is transferred to a single apparatus where the color pages are printed separate from the monochrome pages. It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to select from multiple operation modes wherein one mode transfers all the print data to both the color and monochrome printers and a second mode transfers only the color data to the color printer and only the monochrome data to the monochrome printer. This would give more options to the user.

9. Claims 10-13, 15-16, 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan in view of Morgan. With regard to claim 10, Yan discloses a control method for an image formation system composed of a color image formation apparatus and a monochrome

image-formation apparatus connected to a network, see lines 34-57 of column 22. Yan further

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discloses, in lines 51-52 of column 22, the step of judging if the pages of a print job are color or black/white. Yan further discloses, in line 53 of column 22, the step of sending the color pages to a color printer on the basis of the judgment result. Yan further discloses, in lines 54-55 of column 22, the step of sending the black/white pages to a monochrome printer on the basis of the judgment result. Yan does not disclose the step of controlling an image formation timing of the monochrome images and feed timing of the color sheets or the step of conveying and discharging the sheets. Morgan teaches, in lines 11-26 of the third paragraph of page 382, a control means for coordinating the printing of the monochrome sheets and feeding of the color sheets so that the pages are printed in the right order. Morgan further teaches, in lines 11-26 of the third paragraph of page 382, the step of conveying and discharging the color sheets and monochrome sheets in order to properly collate the job. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Yan to include a step of controlling the image formation timing of the monochrome image formation apparatus and the feed timing of the color sheets and a step of conveying and discharging the color sheets and monochrome sheets in page order of the job. These steps together would allow the apparatus to automatically collate the printed job without a user having to do so by hand.

10. With regard to claim 11, Yan discloses a control method for an image formation system composed of a color image formation apparatus and a monochrome image formation apparatus connected to a network, see lines 34-57 of column 22. Yan further discloses, in lines 51-52 of column 22, the step of judging if the pages of a print job are color or black/white. Yan further discloses, in line 54-55 of column 22, the step of sending the black/white pages to a monochrome printer on the basis of the judgment result. Yan further discloses, in line 53 of column 22, the

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step of sending the color pages to a color printer on the basis of the judgment result. Yan does not disclose the step of controlling an image formation timing of the color images and feed timing of the monochrome sheets or the step of conveying and discharging the sheets. Morgan teaches, in lines 11-26 of the third paragraph of page 382, a control means for coordinating the printing of the color sheets and feeding of the monochrome sheets so that the pages are printed in the right order. Morgan further teaches, in lines 11-26 of the third paragraph of page 382, the step of conveying and discharging the color sheets and monochrome sheets in order to properly collate the job. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Yan to include a step of controlling the image formation timing of the color image formation apparatus and the feed timing of the monochrome sheets and a step of conveying and discharging the monochrome sheets and color sheets in page order of the job. These steps together would allow the apparatus to automatically collate the printed job without a user having to do so by hand.

11. With regard to claim 12, Yan discloses a control method for an image formation system composed of a color image formation apparatus and a monochrome image formation apparatus connected to a network, see lines 34-57 of column 22. Yan further discloses, in lines 51-52 of column 22, the step of judging if the pages of a print job are color or black/white. Yan further discloses, in line 53 of column 22, the step of sending the color pages to a color printer on the basis of the judgment result. Yan further discloses, in lines 54-55 of column 22, the step of sending the black/white pages to a monochrome printer on the basis of the judgment result. Yan does not disclose the step of controlling the feed timing of the sheets or the step of conveying and discharging the sheets. Morgan teaches, in lines 11-26 of the third paragraph of page 382, a

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control means for controlling the feed timing of the color sheets and a feed timing of the monochrome sheets so as to maintain the proper job order. Morgan further teaches, in lines 11-26 of the third paragraph of page 382, the step of conveying and discharging the color sheets and monochrome sheets in page order of the job. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Yan to include a step of controlling feed timing of the color sheets and the feed timing of the monochrome sheets and a step of conveying and discharging the color sheets and monochrome sheets in page order of the job. These steps together would allow the apparatus to automatically collate the printed job without a user having to do so by hand.

12. With regard to claim 13, Yan discloses a control method for an image formation system composed of a color image formation apparatus and a monochrome image formation apparatus connected to a network, see lines 34-57 of column 22. Yan further discloses, in lines 51-52 of column 22, the step of judging if the pages of a print job are color or black/white. Yan further discloses, in lines 53-55 of column 22, the step of sending the color pages to a color printer and sending the black/white pages to a monochrome printer on the basis of the judgment result. Yan does not disclose the step of mixing the color and monochrome sheets in proper job order.

Morgan teaches, in lines 11-12 of the third paragraph of page 382, the step of mixing separately formed color and monochrome sheets in the proper job order. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the control method of Yan to include a step of mixing the sheets formed by the color image formation apparatus with the sheets formed by the monochrome image formation apparatus, in accordance with the judgment result in the judgment step so as to assort each of the sheets in a predetermined order of job.

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This would automatically collate the pages in the correct job order without a user having to do so by hand.

13. With regard to claim 15, Yan in view of Morgan discloses the invention as stated in claim

13. Yan discloses sending color image data and monochrome image data to separate printers.

Any time print data is transferred to a printer in any printer format, page number information is necessarily transferred along with it. Therefore, the system of Yan inherently transfers page number information to the monochrome image formation apparatus along with the monochrome print data.

14. With regard to claim 16, Yan in view of Morgan discloses the invention as stated in claim

13. Yan discloses sending color image data and monochrome image data to separate printers.

Any time print data is transferred to a printer in any printer format, page number information is necessarily transferred along with it. Therefore, the system of Yan inherently transfers page number information to the color image formation apparatus along with the color print data.

15. With regard to claim 17, Yan in view of Morgan discloses the invention as stated in claim

13. Morgan further discloses, in lines 4-13 of the third paragraph of page 382, the method wherein the images formed by the color printer are transported to an input storage area of the monochrome printer and the color pages are interleaved with the monochrome pages.

16. With regard to claim 18, Yan in view of Morgan discloses the invention as stated in claim

13. Morgan further discloses, in lines 4-13 of the third paragraph of page 382, the method wherein the images formed by the color printer are transported to an input storage area of the monochrome printer and the color pages are interleaved with the monochrome pages. Morgan

~~does not disclose the transport of the monochrome printer to an inserter on the color printer and~~

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the subsequent feeding of the monochrome pages interleaved with the color pages. However, this is simply the reverse of the process disclosed by Morgan. The Court has decided in *Ex parte Rubin*, 128 USPQ 440 (Bd. App. 1959) that merely reversing the order of a prior art process is obvious. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to transport the images formed by the monochrome printer to an inserter on the color printer and then feed the monochrome pages so as to interleave them with the color pages.

17. Claims 14 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan in view of Morgan in further view of Sales, *et al.* (4,893,153). With regard to claim 14, Yan in view of Morgan discloses the invention as stated in claim 13. Yan in view of Morgan does not teach transferring the same data to each of the color and monochrome image formation apparatuses. Sales teaches, in lines 51-65 of column 1, the process of a single apparatus producing all the multi-color pages of a job, followed by all the single-color pages of a job, and then collating the two types. It would have been obvious to one of ordinary skill in the art at the time the invention was made to transfer the same data to each of the color image formation apparatus and the monochrome image formation apparatus. This would save the transferring computer the time of determining which printer gets which pages.

18. With regard to claims 19-21, Yan in view of Morgan discloses the invention as stated in claim 1. Yan discloses, in lines 51-55 of column 22, a system wherein color page data is transferred to the color printer and monochrome data is transferred to the monochrome printer. Yan in view of Morgan does not teach plural operation modes wherein one mode transfers all the data to both the color and monochrome apparatus and another mode transfers only the color data

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to the color printer and only the monochrome data to the monochrome printer. Sales teaches a system wherein all the data is transferred to a single apparatus where the color pages are printed separate from the monochrome pages. It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to select from multiple operation modes wherein one mode transfers all the print data to both the color and monochrome printers and a second mode transfers only the color data to the color printer and only the monochrome data to the monochrome printer. This would give more options to the user.

19. Claims 22-25 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan in view of Morgan. With regard to claim 22, Yan discloses a computer-readable storage medium which stores a program to execute a control method for an image formation system composed of a color image formation apparatus and a monochrome image formation apparatus connected to a network, see element figure 2 and lines 34-57 of column 22. Said method of Yan further discloses, in lines 51-52 of column 22, the step of judging if the pages of a print job are color or black/white. Yan further discloses, in line 53 of column 22, the step of sending the color pages to a color printer on the basis of the judgment result. Yan further discloses, in lines 54-55 of column 22, the step of sending the black/white pages to a monochrome printer on the basis of the judgment result. Yan does not disclose the step of controlling the image formation timing of the monochrome image formation apparatus and the feed timing of the color sheets or the step of conveying and discharging the sheets in proper job order. Morgan teaches, in lines 11-26 of the third paragraph of page 382, the step of controlling the image formation timing of the monochrome image formation apparatus and a feed timing of the color sheets. Morgan further teaches, in lines 11-26 of the third paragraph of page 382, the step of conveying and discharging

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the color sheets and monochrome sheets in page order of the job. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Yan to include a step of controlling the image formation timing of the monochrome image formation apparatus and the feed timing of the color sheets and a step of conveying and discharging the color sheets and monochrome sheets in page order of the job. These steps together would allow the apparatus to automatically collate the printed job without a user having to do so by hand.

20. With regard to claim 23, Yan discloses a computer-readable storage medium which stores a program to execute a control method for an image formation system composed of a color image formation apparatus and a monochrome image formation apparatus connected to a network, see element figure 2 and lines 34-57 of column 22. Said method of Yan further discloses, in lines 51-52 of column 22, the step of judging if the pages of a print job are color or black/white. Yan further discloses, in lines 54-55 of column 22, the step of sending the black/white pages to a monochrome printer on the basis of the judgment result. Yan further discloses, in line 53 of column 22, the step of sending the color pages to a color printer on the basis of the judgment result. Yan does not disclose the step of controlling the image formation timing of the color image formation apparatus and the feed timing of the monochrome sheets or the step of conveying and discharging the sheets in proper job order. Morgan teaches, in lines 11-26 of the third paragraph of page 382, the step of controlling the image formation timing of the color image formation apparatus and a feed timing of the monochrome sheets. Morgan further teaches, in lines 11-26 of the third paragraph of page 382, the step of conveying and discharging the monochrome sheets and color sheets in page order of the job. It would have

been obvious to one of ordinary skill in the art at the time the invention was made for the method

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of Yan to include a step of controlling the image formation timing of the color image formation apparatus and the feed timing of the monochrome sheets and a step of conveying and discharging the monochrome sheets and color sheets in page order of the job. These steps together would allow the apparatus to automatically collate the printed job without a user having to do so by hand.

21. With regard to claim 24, Yan discloses a computer-readable storage medium which stores a program to execute a control method for an image formation system composed of a color image formation apparatus and a monochrome image formation apparatus connected to a network, see element figure 2 and lines 34-57 of column 22. Said method of Yan further discloses, in lines 51-52 of column 22, the step of judging if the pages of a print job are color or black/white. Yan further discloses, in line 53 of column 22, the step of sending the color pages to a color printer on the basis of the judgment result. Yan further discloses, in lines 54-55 of column 22, the step of sending the black/white pages to a monochrome printer on the basis of the judgment result. Yan does not disclose the step of controlling the feed timing of the sheets of the step of conveying and discharging the sheets in job order. Morgan teaches, in lines 11-26 of the third paragraph of page 382, the step of controlling the feed timing of the color sheets and a feed timing of the monochrome sheets. Morgan further teaches, in lines 11-26 of the third paragraph of page 382, the step of conveying and discharging the color sheets and monochrome sheets in page order of the job. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the method of Yan to include a step of controlling the feed timing of the color sheets and the feed timing of the monochrome sheets and a step of conveying and discharging the color sheets and monochrome sheets in page order of the job. These steps

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together would allow the apparatus to automatically collate the printed job without a user having to do so by hand.

22. With regard to claim 25, Yan discloses a computer-readable storage medium which stores a program to execute a control method for an image formation system composed of a color image formation apparatus and a monochrome image formation apparatus connected to a network, see element figure 2 and lines 34-57 of column 22. Said method of Yan further discloses, in lines 51-52 of column 22, the step of judging if the pages of a print job are color or black/white. Yan further discloses, lines 53-55 of column 22, the step of sending the color pages to a color printer and sending the black/white pages to a monochrome printer on the basis of the judgment result. Yan does not disclose the step of mixing the color and monochrome sheets in proper job order. Morgan teaches, in lines 11-13 of the third paragraph of page 382, the step of mixing separately formed color and monochrome sheets in the proper job order. It would have been obvious to one of ordinary skill in the art at the time the invention was made for the control method of Yan to include a step of mixing the sheets formed by the color image formation apparatus with the sheets formed by the monochrome image formation apparatus, in accordance with the judgment result in the judgment step so as to assort each of the sheets in a predetermined order of job. This would automatically collate the pages in the correct job order without a user having to do so by hand.

23. With regard to claim 27, Yan in view of Morgan discloses the invention as stated in claim 25. Yan discloses sending color image data and monochrome image data to separate printers. Any time print data is transferred to a printer in any printer format, page number information is necessarily transferred along with it. Therefore, the system of Yan inherently transfers page

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number information to the monochrome image formation apparatus along with the monochrome print data.

24. With regard to claim 28, Yan in view of Ng in further view of Morgan discloses the invention as stated in claim 25. Yan discloses sending color image data and monochrome image data to separate printers. Any time print data is transferred to a printer in any printer format, page number information is necessarily transferred along with it. Therefore, the system of Yan inherently transfers page number information to the color image formation apparatus along with the color print data.

25. With regard to claim 29, Yan in view of Morgan discloses the invention as stated in claim 25. Morgan further discloses, in lines 4-13 of the third paragraph of page 382, the method wherein the images formed by the color printer are transported to an input storage area of the monochrome printer and the color pages are interleaved with the monochrome pages.

26. With regard to claim 30, Yan in view of Morgan discloses the invention as stated in claim 25. Morgan further discloses, in lines 4-13 of the third paragraph of page 382, the method wherein the images formed by the color printer are transported to an input storage area of the monochrome printer and the color pages are interleaved with the monochrome pages. Morgan does not disclose transporting the monochrome images to the color printer and then interleaving the monochrome pages with the color pages. However, this is simply the reverse of the process disclosed by Morgan. The Court has decided in *Ex parte Rubin*, 128 USPQ 440 (Bd. App. 1959) that merely reversing the order of a prior art process is obvious. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to transport the

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images formed by the monochrome printer to an inserter on the color printer and then feed the monochrome pages so as to interleave them with the color pages.

27. Claims 26 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yan in view of Morgan in further view of Sales, *et al.* (4,893,153). With regard to claim 26, Yan in view of Morgan discloses the invention as stated in claim 1. Yan in view of Morgan does not disclose transferring the same data to each of the color image formation apparatus and the monochrome image formation apparatus. Sales teaches, in lines 51-65 of column 1, the process of a single apparatus producing all the multi-color pages of a job, followed by all the single-color pages of a job, and then collating the two types. It would have been obvious to one of ordinary skill in the art at the time the invention was made to transfer the same data to each of the color image formation apparatus and the monochrome image formation apparatus. This would save the transferring computer the time of determining which printer gets which pages.

28. With regard to claims 31-33, Yan in view of Morgan discloses the invention as stated in claim 1. Yan discloses, in lines 51-55 of column 22, a system wherein color page data is transferred to the color printer and monochrome data is transferred to the monochrome printer. Yan in view of Morgan does not disclose plural operation modes wherein the same data is transferred to both the color and monochrome printers in one mode and in another mode, only color data is transferred to the color printer and only monochrome data is transferred to the monochrome printer. Sales teaches a system wherein all the data is transferred to a single apparatus where the color pages are printed separate from the monochrome pages. It would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the user to select from multiple operation modes wherein one mode transfers all the print data to

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both the color and monochrome printers and a second mode transfers only the color data to the color printer and only the monochrome data to the monochrome printer. This would give more options to the user.

Conclusion

29. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lobiondo (5,287,194) discloses a scheduling routine wherein a large print job is distributed among a plurality of printers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Foster whose telephone number is (703)305-1900. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (703)308-7452. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

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